

METHOD AND APPARATUS TO REDUCE RF POWER IN HIGH FIELD MR IMAGING INCORPORATING MULTI-PHASE RF PULSE FLIP ANGLES

ABSTRACT

A technique is set forth that is designed to reduce RF induced power in high field MR imaging that includes application of an initial contrast preserving phase of RF pulses. These initial RF pulses are designed to have a constant, relatively high flip angle over the initial contrast preserving phase. Following an effective TE, a ramp down phase is applied that has a limited number of RF pulses with a flip angle that is less than the flip angle of those in the initial contrast preserving phase. Further, the RF pulses in the ramp down phase have a flip angle that is decreased over the ramp down phase. This technique provides improved resolution and steady contrast and SNR, while significantly reducing induced RF power.